REMARKS/ARGUMENTS

Pursuant to the requirement of 37 CFR 1.121(b), and as stated above, please substitute and replace all the claim sheets, as amended and as originally filed, with the above clean amended set of claims. The marked-up version of the claims below are shown by the conventional comparison system utilizing surrounding brackets for deleted items, and underlining all added words.

The following claim rejections and objections were noted from the Office Action dated August 12, 2002, and pursuant to each paragraph, presented in the same order, arguments follow.

Claim Rejections – 35 USC § 112

2. Claims 3-8, and 11 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

In response to this rejection, amendments have been made to the claims to overcome the rejections under 35 USC 112, second paragraph. The terms "computer usable medium", "template", "value receptacle", "tolerances", "???", "screen forms", "to a state", along with their objectionable contexts have been either deleted or amended to render the claims allowable. Support for the amendments can be found throughout the originally filed specification, and no new matter has been incorporated.

Claim Rejections – 35 USC § 102

4. Claims 3-8 and 11, as best understood, were rejected under 35 U.S.C. 102(e) as being anticipated by Maack - 5,766,057.

In response to this rejection, Applicants would like to point out specific differences between the cited prior art and the present invention, on two fronts. Amendments to the claims now more clearly define the present invention and the differences.

First, with respect to the actual dressing operation, there are significant structural differences. Upon careful review of the Maack reference, it was noted that the CNC dressing is carried out on the grinding and regulating wheels carried on opposed fee slides. The workrest of Maack is fixed to the base BETWEEN the opposed wheels. This means that the grinding wheel 16 and the regulating wheel 18 must be dressed separately, and then they must be manually readjusted to make their surfaces as close to parallel in order to achieve a high tolerance repeatability (note column 3 / lines 35-43). In other words, you would have to dress the grinding wheel on one dresser (H), and then dress the regulating roller on a separate dresser (D). Blade 12 would have to dressed by yet another operation. To mate them all back up in perfect parallel configurations, one would have to practically use a laser to keep tight tolerances, otherwise the workpiece itself would be rolling around an un-aligned set of wheels, and the tolerances would not be able to be kept.

In the present invention, very high tolerances are kept because the computer controlled dressing operation simultaneously occurs on at least one of the grinding wheel, the workrest blade, and the regulating wheel or roller because the grinding wheel and the regulating wheel are on the same spindle, and the workrest blade may be pivoted backward to receive the dressing roller between itself and either the grinding wheel or the regulating roller, which are on the same spindle. Therefore, as the dressing roller is moved back and forth across the surfaces of the

two wheels, simultaneous dressing of the blade also occurs. Under these conditions, all the surfaces are dressed *with respect to each other*, and this yields a perfect parallel situation between their surfaces. This means that no further adjustments are needed, and any workpiece is therefore going to be ground to near perfection. That is why the owner of this invention provides grinding accuracies of at least a millionth of an inch.

Secondly, the amended claims now recite a grinding system including a computer program, a computer and a rotational grinding apparatus which is capable of being instanteously programmed to perform a desired grinding pattern. This claimed feature is truly revolutionary in the grinding art, as prior art units need to be reprogrammed by a computer programmer before each new job configuration is performed. For instance, the Maack grinding machine is a CNC controlled grinder, and once it is programmed, it can only perform one function before an entirely new computer program can be input into the computer. This function can only really be performed by a computer programmer, so it is important that the machine operator be ready to perform the desired grinding operation over and over again many times before it needs to be shut down for re-programming. It is highly unlikely that the machine operator would be able to quickly re-program .

In direct contrast, the present invention has a computer program that allows the machine operator to create his own computer programs with absolute minimal work. As it works, when the grinding operation begins, a computer screen comes up, and asks the operator to pick the approximate shape that he desires. Then, value windows come up on the next screen, and when he puts in the desired values (from his specifications), the computer automatically writes its own program, and he is ready to start an entirely new grinding operation with less than a minute.

The consequence of these benefits mean that any grinding operation can be set up in less than a minute, by the operator (not a computer programmer), and once dressed, the grinding

machine will produce a ground part that is as near to perfect as one can get. If someone comes up to the operator and asks him to change the grinding operation for a new part, no problem, he just inputs new values, and within a minute, he can begin the new grinding operation. Of course, dressing takes almost no time because all the components are dressed simultaneously, and NO adjustment is necessary between the dressed components. Because of these huge benefits, the present invention is enjoying great commercial success.

For the reasons discussed above, Applicants respectfully submit that claims 3-4, 6-8 and 11 are now in condition for allowance, and request that the Examiner give such an allowance.

Applicants wish to thank the Examiner for her thorough examination, and hope, that by these Amendments and discussion, the subject matter of the present invention is now more clearly stated, such that a closer review of the present invention, in light of the amendments and arguments made here, will give solid support for an allowance. Consequently, Applicants request reconsideration in the instant Application and withdrawal of all grounds of rejection and objection in view of the amendments and the following discussion.

Formal drawings will be forwarded to the Patent Office after the Notice of Allowance has been received. If the Examiner feels that the prosecution of this Application can be expedited by conversation, she is courteously requested to place a telephone call to Applicants' attorney at the number listed below.

In view of the foregoing, it is believed that the remaining claims now distinguish over the prior art and are allowable. For the reasons discussed above, it is believed that this Application is now in an allowable condition such that it is appropriate to hereby respectfully solicit its allowance.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

3. (Amended) A ***computer*** program ***in combination with a computer and a rotational grinding apparatus having a grinding wheel, a blade and a regulating roller*** [on a computer usable medium] for enabling a user through a user interface to control [the process of] ***the rotational grinding apparatus to dress*** [dressing] a grinding wheel using a wheel dressing roller supported on a spindle, [the grinding wheel and the wheel dressing roller being of a rotational grinding apparatus, the program] comprising:

means for displaying a ***computer screen*** template ***having various value display windows, said template including*** [which includes] at least one ***data input*** value ***display window*** [receptacle], the value ***displayed in the display window corresponding to a numerically controlled pattern of dressing, and said pattern of dressing being variable by changing the value in the display window*** [receptacle relating to a variable];

means for accepting a value from the user and displaying the value in the value ***window*** [receptacle] ;

whereby selecting various values in the display windows automatically directs the computer to write a new computer program to control the grinding apparatus to in-situ dress at least one of the grinding wheel, the blade, and the regulating roller in a desired configuration.

4. The program according to claim 3, further comprising means for changing the value in the value ***windows*** [receptacle] to increase or decrease the ***values displayed in the value windows*** [tolerances] by using a mouse to scroll up ***and*** [or] down a value list.

Please cancel claim 5.

6. (Amended) A ***computer*** program ***in combination with a computer and a rotational grinding apparatus having a grinding wheel, a blade and a regulating roller*** [on a computer usable medium] for enabling a user through a user interface to control [the process of] ***the rotational grinding apparatus to dress*** [dressing a] ***the*** regulating roller [using a grinding wheel, both] of a rotational grinding apparatus, [the program] comprising:

means for displaying a ***computer screen*** template ***having various value display windows, said template including*** [which includes] at least one ***data input*** value ***display window*** [receptacle], the value ***displayed in the display window corresponding to a numerically controlled pattern of regulator dressing, and said pattern of dressing being variable by changing the value in the display window*** [receptacle] relating to a variable in the process of dressing [a] ***the*** regulating roller;

means for accepting a value from the user and displaying the value in the value ***window*** [receptacle] ;

whereby selecting a value in the display window automaticallydirects the computer to write a new program to dress at least one of the regulating wheel and the blade in a desired configuration .

7. The program according to claim 6, further comprising means for [transferring] ***changing*** the value in the value [receptacle to ???] ***display window to either increase or decrease the values*** [tolerances].

8. The program according to claim 6, further comprising means for enabling modification of the accepted value.

11. A computer system for enabling the [construction] ***creation*** of a computer program by a user using display monitor value windows [screen forms], the computer program [for obtaining data] to control [the motions of] a rotational grinding apparatus, the computer system also

for compiling [the obtained] data so that the rotational grinding [machine] apparatus performs as the user specifies, the computer system comprising:

means for displaying a program screen form having at least one value ***display window*** [receptacle] which relates to a variable in the process of grinding with a rotational grinding apparatus;

means for accepting a value from the user and displaying the value in the value ***display window*** [receptacle];

means for sending the accepted value to a computer program for operating the grinding apparatus; and

means for ***creating*** [compiling the] ***a new*** computer program containing the accepted value [to a state] such that the computer program [may be understood by] ***controls*** the grinding apparatus.